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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/310,024	05/11/1999	NOBUHITO MATSUSHIRO	09976-5(OB00	8270

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EXAMINER	
JONES, HUGH M	

ART UNIT	PAPER NUMBER
2128	8

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/310,024	MATSUSHIRO, NOBUHITO
	Examiner	Art Unit
	Hugh Jones	2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15-21* is/are allowed.

6)☒ Claim(s) *9-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 9-21 of U.S. Application 09/310,024, filed 05/11/1999, are presented for examination.

Claim Interpretation

2. The Examiner interprets the invention to be magnification of images using fractal (in the more narrow claims) processing of the original image data. Claim 15, for example, appears to recite interpolation of an image to a larger image; fractal processing of an image to create a larger image and; a second magnification of either previous enlargement. Claim 9, however, merely claims interpolation. The Examiner observes that generic as well as fractal interpolation schemes are well known in the art. It is also interpreted that the last limitation of claim 9 refers to intended use. Applicants are reminded of the plain language in claim 9, which could be steps carried out by a person. Thus, the "comparing" and "deciding" could be arbitrarily performed by a person. Finally, it is interpreted that "color" (as in claim 14) refers to intended use.

3. The claims will be interpreted as discussed for purposes of a prior art rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

5. Claims 9-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9, for example, recites comparing, but does

not specify the basis or criterion for comparison. It is also not clear whether the first and second transformations in claim 9 are the same transformations or different transformations, and claim 9 is thus ambiguous.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

8. Claims 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Barnsley et al.* or *Pentland et al.* in view of of the taking of Official notice.

Barnsley et al. (US 5,065,447) disclose ***fractal transformation of images*** including digital image data which is automatically processed by dividing stored image

data into domain blocks and range blocks. The range blocks are subjected to processes such as a shrinking process to obtain a mapped range blocks. Then, for each domain block, the mapped range block which is most similar to the domain block is determined, and the address of that range block and the processes the block was subjected to are combined as an identifier which is appended to a list of identifiers for other domain blocks. The list of identifiers for all domain blocks is called a fractal transform and constitutes a compressed representation of the input image. To decompress the fractal transform and recover the input image, an arbitrary input image is formed into range blocks and the range blocks processed in a manner specified by the identifiers to form a representation of the original input image. See figures 5-6, 9, 12-13, 19-20, 27, 29-30 and corresponding text which disclose the minutia of fractal processing of images. Note col. 22, lines 49-68 (upsampling and higher resolution).

Pentland et al. (US 5,148,497) disclose an image interpolator for converting an original image into an enhanced image, the interpolator including rule logic for embodying a rule specifying how pixel patterns associated with first subband image data transform into corresponding pixel patterns associated with second subband image data, the first and second subband image data being derived from a reference image; and conversion logic for generating the enhanced image from the original image based upon the rule. See especially col. 1, lines 9-10; col. 1, line 46 to col. 3, line 7; col. 3, line 38 to col. 4, line 32; col. 7, lines 29-45. Note fig. 7.

9. The cited art does not disclose deciding which image to output after the processing. It is noted that a recitation of the intended use of the claimed invention must

result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Allowable Subject Matter

10. Claims 15-21 are allowed over the prior art of record. The prior art of record does not disclose or suggest the fractal filter for comparing (next to last limitation in claim 15)

Response to Arguments

11. Applicant's arguments filed 4/1/2004 have been fully considered but they are not persuasive.

12. Applicants are thanked for the new specification, which has been entered.

13. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

14. The Examiner would like to point out that Barnsley does in fact disclose outputting the image at a higher resolution. See col. 22, lines 49-68.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

16. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. **Any inquiry concerning this communication or earlier communications from the examiner should be:**

directed to:

Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to 0700 ET, ***or*** the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to: Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 308-9051 (for formal communications intended for entry) ***or***

(703) 308-1396 (for informal or draft communications, please label "*PROPOSED*" or "*DRAFT*").

Dr. Hugh Jones

Primary Patent Examiner

June 12, 2004

HUGH JONES Ph.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100